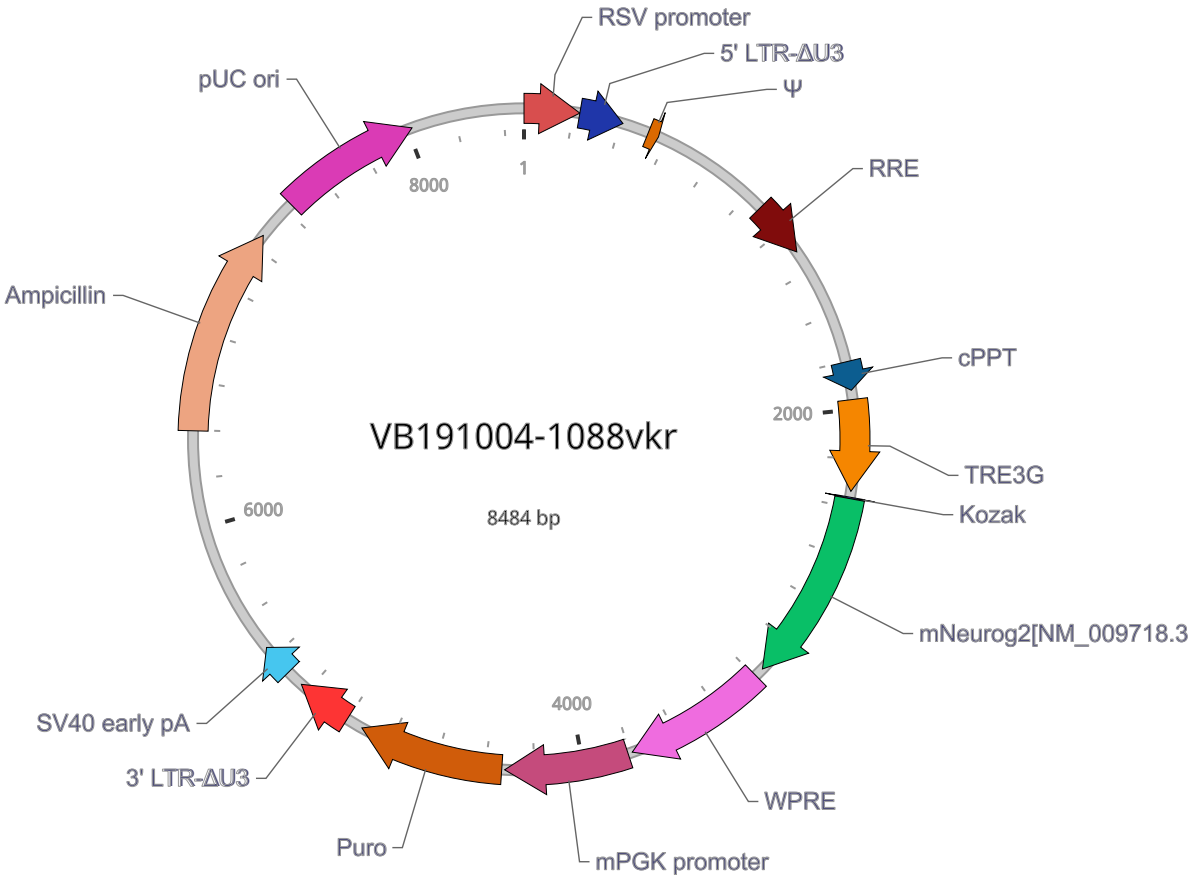
Vector Summary

Vector ID	VB191004-1088vkr
Vector Name	pLV[TetOn]-Puro-TRE3G>mNeurog2[NM_009718.3]
Vector Size	8484 bp
Viral Genome Size	5009 bp
Vector Type	Mammalian Tet-On Inducible Gene Expression Lentiviral Vector
Inserted Promoter	TRE3G
Inserted ORF	mNeurog2[NM_009718.3]
Inserted Marker	Puro
Plasmid Copy Number	High
Antibiotic Resistance	Ampicillin
Cloning Host	VB UltraStable (or alternative strain)

Vector Map



Vector Components

Name	Position	Size (bp)	Type	Description	Application notes
RSV promoter	1-229	229	Promoter	Rous sarcoma virus enhancer/promoter	Strong promoter; drives transcription of viral RNA in packaging cells.
5' LTR-ΔU3	230-410	181	LTR	Truncated HIV-1 5' long terminal repeat	Allows transcription of viral RNA and its packaging into virus.
Ψ	521-565	45	Miscellaneous	HIV-1 packaging signal	Allows packaging of viral RNA into virus.
RRE	1075-1308	234	Miscellaneous	HIV-1 Rev response element	Rev protein binding site that allows Rev-dependent nuclear export of viral RNA during viral packaging.
cPPT	1803-1920	118	Miscellaneous	Central polypurine tract	Facilitates the nuclear import of HIV-1 cDNA through a central DNA flap.
TRE3G	1959-2334	376	Promoter	Tetracycline-responsive element promoter (3rd generation)	Bound by transactivator Tet3G in the presence of tetracycline or its analogs (e.g. doxycycline); low background activity.
Kozak	2359-2364	6	Miscellaneous	Kozak translation initiation sequence	Facilitates translation initiation of ATG start codon downstream of the Kozak sequence.
mNeurog2[NM_009718.3]	2365-3156	792	ORF	*None*	*None*
WPRE	3195-3792	598	Miscellaneous	Woodchuck hepatitis virus posttranscriptional regulatory element	Enhances virus stability in packaging cells, leading to higher titer of packaged virus; enhances higher expression of transgenes.

Name	Position	Size (bp)	Type	Description	Application notes
mPGK promoter	3811-4321	511	Promoter	Mouse phosphoglycerate kinase 1 promoter	Medium-strength promoter.
Puro	4334-4933	600	ORF	Puromycin resistance gene	Allows cells to be resistant to puromycin.
3' LTR-ΔU3	5004-5238	235	LTR	Truncated HIV-1 3' long terminal repeat	Allows packaging of viral RNA into virus; self-inactivates the 5' LTR by a copying mechanism during viral genome integration; contains polyadenylation signal for transcription termination.
SV40 early pA	5311-5445	135	PolyA_signal	Simian virus 40 early polyadenylation signal	Allows transcription termination and polyadenylation of mRNA transcribed by Pol II RNA polymerase.
Ampicillin	6399-7259	861	ORF	Ampicillin resistance gene	Allows E. coli to be resistant to ampicillin.
pUC ori	7430-8018	589	Rep_origin	pUC origin of replication	Facilitates plasmid replication in E. coli; regulates high-copy plasmid number (500-700).

Note: Components added by user are listed in bold red text.

Vector Sequence

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   1 AATGTAGTCT TATGCAATAC TCTTGTAGTC TTGCAACATG GTAACGATGA GTTAGCAACA TGCCTTACAA GGAGAGAAAA
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